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Activity 4 – Structure Testing Practice Questions

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The Publishing Company

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Task Scenario

- You have been asked to create a database for the East Berkshire Publishing Company
- Currently all records are stored on a spreadsheet
- The Company would like to be able to store information about their books
- The Company would like to be able to report on how their books are published

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Task Scenario

The database will record information about:

Authors

Titles

Editions

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Task Scenario

- An edition is the actual printed copy of a book, for which they need to record the:
- type of book
- publication date
- edition number
- number of copies sold and price.
- The editions can be hardback, paperback or audio
- The company wants the flexibility to add new types of editions
- There must always be at least one edition of a book sold

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Task Scenario

When an edition sells between:

2000 – 4999 copies it is bronze edition

5000 – 10000 copies it is silver edition

Over 10000 copies it is a gold edition

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Task Scenario

When a first print run is sold out (EditionNumber = 1), a second print run is done and these books are EditionNumber = 2

Books cannot be published before 01/07/2020

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The Data

EditionID	AuthorID	BookID	Publication Date	Book Title	Book Type ID	Book Genre	Author Name	Edition Number	Number of Copies	Book Type	Price
200	11	71	01/07/2020	Flowers	1	Thriller	Smith	1	1000	Hardback	£10

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Testing

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How To Carry Out Testing

- In order to test if your database works, you will need some test data.
- You could use data that you know will work.
- You may need to use data that is deliberately wrong.
- This is to make sure that your database rejects any data that is incorrect.
- This is your test data.
- You are testing your database to make sure it works with **GOOD** and **BAD** data.

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How To Carry Out Testing

For example, if you have a column that expects a word **NO BIGGER** than 8 letters.

You need to test it with a 6-letter word, and this should be **FINE.**

You need to test it with a 10-letter word, and this should make your database show an **ERROR MESSAGE.**

If you do not see an error message, then you have not configured your database properly.

You would need to check with both pieces of data to make sure your database is working.

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The Types of Test Data

Imagine we have table of Customers.

One of the table columns is “Age”.

It is designed with the datatype Integer.

A typical piece of data that could be entered is 47.

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The Types of Test Data

Test Data Type	Letter	Meaning	Example
Normal	N	Ordinary data that can be input into a column	Enter 47 into the Age column

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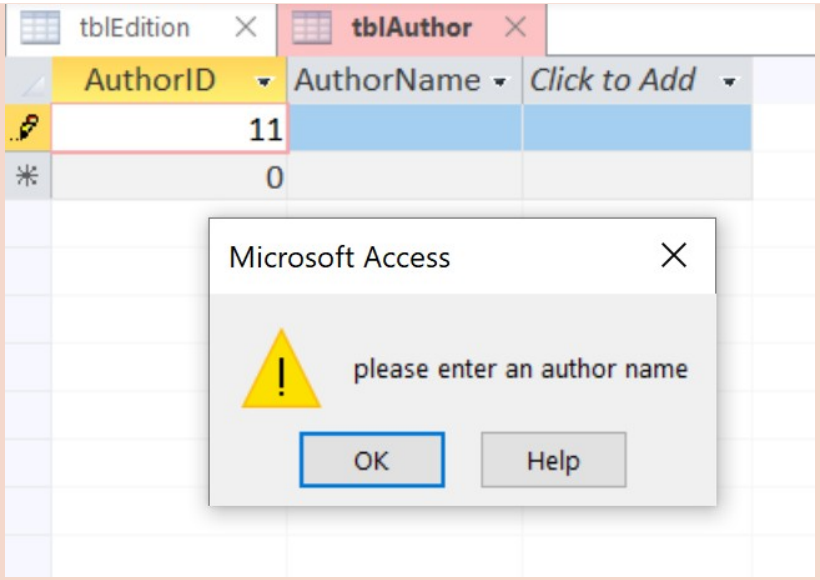
Test 1 - An author record will not save without the name of the author being present

Test No.	Type of Test (N,R,X)	Test Data	Expected results	Add screenprint(s) of the results of this test (and any retests) Ensure you show the test data used in the screenprint(s)	Only complete this column if the results are not as expected
1	R	Author name not supplied	An error message will be displayed		

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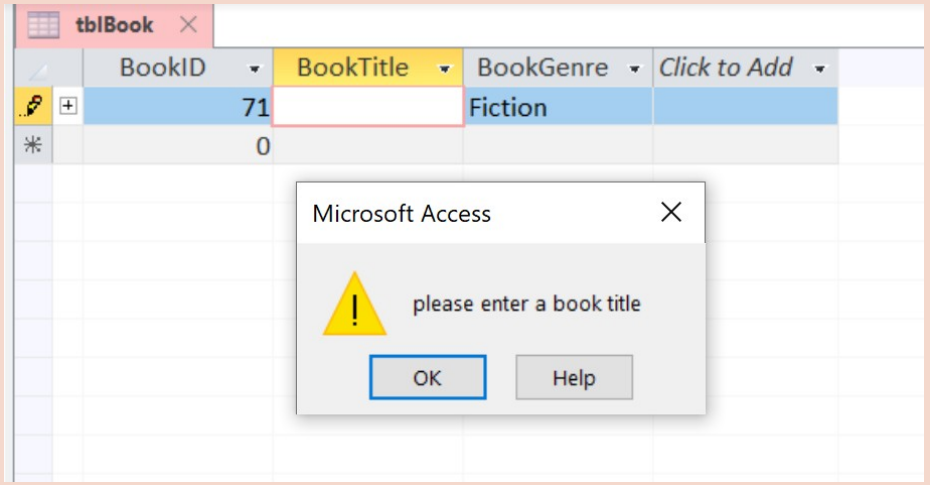
Test 2 - A book record will not save if the title is missing

Test No.	Type of Test (N,R,X)	Test Data	Expected results	Add screenprint(s) of the results of this test (and any retests) Ensure you show the test data used in the screenprint(s)	Only complete this column if the results are not as expected
2	R	Title is not supplied	An error message will be displayed		

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Glossary of Terms

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Glossary – Relational Database 1

Key Term	Definition
Attribute	Another name for a Column (or Field) in a Table in a Database.

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Glossary – Relational Database 2

Key Term	Definition
Entity Relationship	How data inside one Table is linked to data inside another Table in the same database. Relationships can be one:one, one:many and many:many.

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Glossary – Relational Database 3

Key Term	Definition
Candidate Key	When you have identified some columns that MIGHT be a good Primary Key.

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Glossary – Relational Database 4

Key Term	Definition
One to One relationship	When a Record in one table has a match with one **AND ONLY ONE** Record in another table. The Record in the second table matches one **AND ONLY ONE** Record in the first Table.

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Glossary - Normalisation

Key Term	Definition
Cascading Update	When any Updates made in one Table are reflected in other Tables that are Joined by a Foreign Key.

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Glossary – SQL

Key Term	Definition
Query	The process of asking a Database a question to get a specific answer.

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